ECTUAL PROPERTY ORGAN WORLD INTEL International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT

(51) International Patent Classification 6: WO 99/58545 (11) International Publication Number: A1 C07H 17/00 (43) International Publication Date: 18 November 1999 (18.11.99) (81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, (21) International Application Number: PCT/GB99/01508 BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, (22) International Filing Date: 12 May 1999 (12.05.99) KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, (30) Priority Data: ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, IL 124460 13 May 1998 (13.05.98) UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, 9900832.8 15 January 1999 (15.01.99) GB RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, (71) Applicant (for all designated States except US): CENES NE. SN. TD. TG). LIMITED [GB/GB]; Compass House, Vision Park, Chivers Way, Histon, Cambridge CB4 4ZR (GB).

Published

With international search report.

(54) Title: PROCESS FOR PREPARATION OF 4,5-EPOXYMORPHINAN-6-OXYGLUCURONIDES

(57) Abstract

(72) Inventors: and

(75) Inventors/Applicants (for US only): GUTMAN, Arie, L. [IL/IL]; Kroch Street 2, Ramat, Begin, 34752 Haifa (IL). NISNEVITCH, Genadi [IL/IL]; Tsahal Street 10/24, 36740 Nesher (IL). YUDOVITCH, Lev [IL/IL]; Ta'anach Street 24/10, 32161 Haifa (IL). ROKHMAN, Igor [IL/IL]; Moshe

(74) Agent: DAVIES, Jonathan, Mark; Reddie & Grose, 16 Theobalds Road, London WCLX 8PL (GB).

Sharet Street 83/4, 29000 Kyriat Yam (IL).

Conjugation of 4,5-Epoxymorphinan-6-ols with Bromoglucuronides in the presence of Zinc containing compounds as activator under conditions capable of forming 4,5-Epoxymorphinan-6-oxyglucuronides is disclosed. This novel approach provides an efficient method for preparation of both anomers of 4,5-Epoxymorphinan-6-oxyglucuronides. The deprotected end products are useful as analgesic agents.